We claim:

1. A method for antialiasing, comprising:

representing a set of objects with a set of two-dimensional distance fields, there being one distance field for each object;

partitioning each two-dimensional distance field into cells;

associating, with each cell, a method for reconstructing the corresponding two-dimensional distance field within the cell;

identifying, for each two-dimensional distance field in the set of two-dimensional distance fields, a set of cells of the two-dimensional distance field, the set of cells associated with a region of the set of objects;

locating a set of pixels associated with the region;

specifying a set of components for each pixel in the set of pixels; and

determining an antialiased intensity for each component of each pixel in the set of pixels, the determining further comprising:

determining, for each two-dimensional distance field in the set of two-dimensional distance fields, a corresponding distance for the component of the pixel using the corresponding set of cells;

combining the corresponding distances to determine a combined distance; and

mapping the combined distance to the antialiased intensity of the component of the pixel.

2. The method of claim 1 wherein the combining performs a maximum of the corresponding distances to determine the combined distance.

3. The method of claim 1 wherein the combining performs an arithmetic average of the corresponding distances to determine the combined distance.

4. The method of claim 1 wherein the combining performs a union of the corresponding distances to determine the combined distance.

5. The method of claim 1 wherein the combining performs an intersection of the corresponding distances to determine the combined distance.

6. The method of claim 1 wherein the combining performs a difference of the corresponding distances to determine the combined distance.

7. The method of claim 1 wherein the combining performs an implicit blend of the corresponding distances to determine the combined distance.

8. The method of claim 1 wherein the combining performs an arithmetic operation on the corresponding distances to determine the combined distance.

9. The method of claim 1 wherein the combining performs a conditional operation on the corresponding distances to determine the combined distance.

10. The method of claim 1 wherein the combining uses a procedure to determine the combined distance.

11. The method of claim 1 wherein the combining uses a table to determine the combined distance.

12. An apparatus for antialiasing, comprising:

a means for representing a set of objects with a set of two-dimensional distance fields, there being one distance field for each object;

a means for partitioning each two-dimensional distance field into cells;

a means for associating, with each cell, a method for reconstructing the corresponding two-dimensional distance field within the cell;

a means for identifying, for each two-dimensional distance field in the set of two-dimensional distance fields, a set of cells of the two-dimensional distance field, the set of cells associated with a region of the set of objects;

a means for locating a set of pixels associated with the region;

a means for specifying a set of components for each pixel in the set of pixels; and

a means for determining an antialiased intensity for each component of each pixel in the set of pixels, the determining further comprising:

a means for determining, for each two-dimensional distance field in the set of two-dimensional distance fields, a corresponding distance for the component of the pixel using the corresponding set of cells;

a means for combining the corresponding distances to determine a combined distance;

a means for mapping the combined distance to the antialiased intensity of the component of the pixel; and

a display device for displaying the antialiased intensity of the component of the pixel.

13. The apparatus of claim 12 wherein the display device is a CRT monitor.

14. The apparatus of claim 12 wherein the display device is an LCD monitor.

15. The apparatus of claim 12 wherein the display device is an OLED monitor.

16. The apparatus of claim 12 wherein the display device comprises a set of components, wherein each component in the set of components is individually addressable.

17. The apparatus of claim 12 wherein the display device is a part of a personal digital assistant.

18. The apparatus of claim 12 wherein the display device is a part of a communication device.

19. The apparatus of claim 12 wherein the display device is a part of a gaming device.

20. The apparatus of claim 12 wherein the display device is a part of an appliance.

21. The apparatus of claim 12 wherein the display device is a part of an electronic device.